THE MICROWAVE SPECTRA AND MOLECULAR STRUCTURES OF *CIS*- and *TRANS*-1,1,1-TRIFLUORO-2,3-EPOXYBUTANE

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Connected to our efforts in characterizing substituted oxiranes for use as potential chiral tags for the conversion of enantiomeric molecules into spectroscopically distinct diastereomeric complexes for chiral analysis, we have obtained and analyzed the spectra of both the *cis* and *trans* isomers of 1,1,1-trifluoro-2,3-epoxybutane. Although the spectrum of the *trans* isomer and all four of its singly-substituted ^{13}C isotopologues, obtained in natural abundance, could be satisfactorily analyzed as a centrifugally-distorting rigid rotor asymmetric top, the spectrum of the *cis* isomer showed the effects of methyl group internal rotation. Progress on assigning and analyzing the spectrum of this isomer will be reported.